

All scientific publications and patent documents are incorporated herein by reference.

The present invention has been described with regard to preferred embodiments. However, it will be obvious to persons skilled in the art that a number of variations and modifications can be made without departing from the scope of the invention as described in the following claims.

COPIES OF THE PATENT DOCUMENTS INCORPORATED BY REFERENCE ARE ATTACHED TO THIS APPLICATION.

**THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE
PROPERTY OF PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:**

1. A modified nucleic acid, wherein the wild type form of said nucleic acid encodes a ribosomal protein L3 and wherein a host transformed with said modified nucleic acid is resistant to trichothecene mycotoxins, wherein the modification is sufficient to reduce the mycotoxin binding capabilities of the encoded ribosomal protein L3 but is insufficient to destroy the function of the nucleic acid as a ribosomal protein gene, with the proviso that said gene is not from *Saccharomyces cerevisiae*.
2. The modified nucleic acid of claim 1, wherein the gene is modified by a base pair substitution, deletion, addition or inversion.
3. The modified nucleic acid of claim 2, wherein the modification occurs between amino acid 209 and 284, based on the amino acid numbering of the rice gene.
4. The modified nucleic acid of claim 3, wherein the source of the nucleic acid encoding the ribosomal protein L3 is selected from the group consisting of: rice, *Arabidopsis thaliana*, monocotyledons, rat, mice, human and *C. elegans*.
5. The modified nucleic acid of claim 4, wherein the nucleic acid encoding the ribosomal protein L3 nucleic acid is selected from the group consisting a corn gene, a sorghum gene, a wheat gene, a barley gene and an oat gene.
6. The modified nucleic acid of claim 5, wherein the nucleic acid has a sequence which will encode the amino acid sequence selected from the group consisting of SEQ ID No.:3, SEQ ID No.:14, SEQ ID No.:15, SEQ ID No.:16, SEQ ID No.:17 and SEQ ID No.:18, with the sequence encoding a cysteine at position 258, or a functional equivalent thereof.
7. A cloning vector containing a modified ribosomal protein L3 nucleic acid as defined in claim 1.

8. The cloning vector of claim 7, wherein the nucleic acid is modified by a base pair substitution, deletion, addition or inversion.
9. The cloning vector of claim 8, wherein the nucleic acid encoding the ribosomal protein L3 is selected from the group consisting of: rice, *Arabidopsis thaliana*, monocotyledons, rat, mice, human and *C. elegans*.
10. The cloning vector of claim 9, wherein the nucleic acid encoding the ribosomal protein L3 selected from the group consisting a corn gene, a sorghum gene, a wheat gene, a barley gene, and an oat gene.
11. The cloning vector of claim 10, wherein the nucleic acid has a sequence which will encode the amino acid sequence selected from the group consisting of SEQ ID No.:3, SEQ ID No.:14, SEQ ID No.:15, SEQ ID No.:16, SEQ ID No.:17 and SEQ ID No.:18, with the sequence encoding a cysteine at position 258, or a functional equivalent thereof.
12. A transformed plant transformed with a modified ribosomal protein L3 nucleic acid of claim 1, wherein said transformed plant is resistant to *Fusarium* infestation.
13. The plant of claim 12, wherein the nucleic acid is modified by a base pair substitution, deletion, addition or inversion.
14. The plant of claim 13, wherein the nucleic acid encoding the ribosomal protein L3 is selected from the group consisting of: rice, *Arabidopsis thaliana*, monocotyledons, rat, mice, human and *C. elegans*.
15. The plant of claim 14, wherein the nucleic acid encoding the ribosomal protein L3 is selected from the group consisting of a corn gene, a sorghum gene, a wheat gene, a barley gene and an oat gene.
16. The plant of claim 15, wherein the nucleic acid has a sequence which will encode the amino acid sequence selected from the group consisting of SEQ ID No.:3, SEQ ID

No.:14, SEQ ID No.:15, SEQ ID No.:16, SEQ ID No.:17 and SEQ ID No.:18, with the sequence encoding a cysteine at position 258, or a functional equivalent thereof.

17. Seeds from a transformed plant as defined in claim 12.
18. Seeds from a transformed plant as defined in claim 13.
19. Seeds from a transformed plant as defined in claim 14.
20. Seeds from a transformed plant as defined in claim 15.
21. Seeds from a transformed plant as defined in claim 16.
22. A method of increasing resistance to *Fusarium* infestation by transforming a suitable plant with a modified nucleic acid as defined in claim 1, wherein the plant transformed with said nucleic acid is resistant to trichothecene mycotoxins and wherein said method comprises the steps of:
 - providing a modified nucleic acid and
 - transforming a suitable plant with said nucleic acid.
23. A method of using the modified gene as defined in claim 1, as a selectable marker in transformation experiments of animals or plants.